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(54) ROLLING BEARING

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(57) Abstract:

PROBLEM TO BE SOLVED: To attain extending of a life, by improving lubricating ability and wearing resistance on a surface of a raceway ring and a rolling element, in a rolling bearing.

SOLUTION: In a rolling bearing A using a fluorocarbon lubricant, a diamond like carbon film 5 is formed in at least any of a raceway surfaces of inner/outer rings 1, 2 or a surface of a rolling element 3. Since the fluorocarbon lubricant has good wettability relating to the diamond like carbon film 5, an oil film of the fluorocarbon lubricant is difficult to be interrupted even when the rolling element 3 is slid, without rolling. Even when the oil film is temporarily interrupted, by protecting a rolling/sliding location with the diamond like carbon film 5 of very hard quality, direct contact between the inner/outer rings 1, 2 and the rolling element 3 is avoided.

